

Title (en)
CHARGING APPARATUS AND CHARGING/DISCHARGING APPARATUS

Title (de)
LADEVORRICHTUNG UND LADE-/ENTLADEVORRICHTUNG

Title (fr)
APPAREIL DE CHARGE ET APPAREIL DE CHARGE/DECHARGE

Publication
EP 2006974 A2 20081224 (EN)

Application
EP 07738114 A 20070309

Priority
• JP 2007054629 W 20070309
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Abstract (en)
Charging apparatus 10 includes secondary battery 13 used for buffering, rectifier 11 that supplies direct current power to secondary battery 13 used for buffering, DC-DC converter 14 connected to driving battery 3 in electric vehicle 2 via charging cable 4, switching control circuit 12, and isothermal wind generator 16 that adjusts the temperature of secondary battery 13 used for buffering from outside of secondary battery 13 used for buffering. Switching control circuit 12 switches charging apparatus 10 between a first mode in which power supplied by rectifier 11 is accumulated in secondary battery 13 used for buffering and a second mode in which driving battery 3 is charged with the power supplied by secondary battery 13 used for buffering. Secondary battery 13 used for buffering includes at least one cell in which a battery element with a positive electrode plate and a negative electrode plate that are laminated therein is sealed with an outer cover film.

IPC 8 full level
H02J 7/00 (2006.01); **B60L 3/00** (2006.01); **B60L 11/18** (2006.01); **H01M 6/50** (2006.01); **H01M 10/44** (2006.01); **H01M 10/613** (2014.01); **H01M 10/615** (2014.01); **H01M 10/625** (2014.01); **H01M 10/655** (2014.01); **H01M 10/6563** (2014.01); **H01M 10/6571** (2014.01); **H01M 10/6572** (2014.01); **H02J 7/02** (2006.01); **H02J 7/34** (2006.01)

CPC (source: EP KR US)
B60L 3/0046 (2013.01 - US); **B60L 53/11** (2019.01 - EP US); **B60L 53/14** (2019.01 - EP US); **B60L 53/20** (2019.01 - EP US); **B60L 58/24** (2019.01 - EP); **B60L 58/25** (2019.01 - EP US); **B60L 58/26** (2019.01 - EP US); **H01M 6/5033** (2013.01 - EP US); **H01M 10/44** (2013.01 - EP KR US); **H01M 10/613** (2015.04 - EP US); **H01M 10/615** (2015.04 - EP US); **H01M 10/625** (2015.04 - EP US); **H01M 10/655** (2015.04 - EP US); **H01M 10/6563** (2015.04 - EP US); **H01M 10/6571** (2015.04 - EP US); **H01M 10/6572** (2015.04 - EP US); **H02J 7/00** (2013.01 - KR); **H02J 7/0014** (2013.01 - EP US); **H02J 7/342** (2020.01 - EP US); **B60L 2210/10** (2013.01 - EP US); **H01M 10/647** (2015.04 - EP US); **H02J 7/00309** (2020.01 - EP US); **H02J 7/0048** (2020.01 - EP US); **H02J 7/02** (2013.01 - EP US); **Y02E 60/10** (2013.01 - EP); **Y02T 10/70** (2013.01 - EP US); **Y02T 10/7072** (2013.01 - EP US); **Y02T 10/72** (2013.01 - EP US); **Y02T 10/92** (2013.01 - EP US); **Y02T 90/12** (2013.01 - US); **Y02T 90/14** (2013.01 - EP US)

Cited by
EP2469682A4; CN102292866A; EP2770576A4; EP2811630A3; US9627965B2; EP2384922A3; WO2010083983A1; WO2016203383A1; EP2567424B1; EP2384922A2

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